

# **Puget Sound Gateway Program**

## **SR 509**

**Steering Committee**  
**March 24, 2016**

CRAIG J. STONE, PE   GATEWAY PROGRAM ADMINISTRATOR  
OMAR JEPPEPERSON, PE   SR 509 PROJECT MANAGER

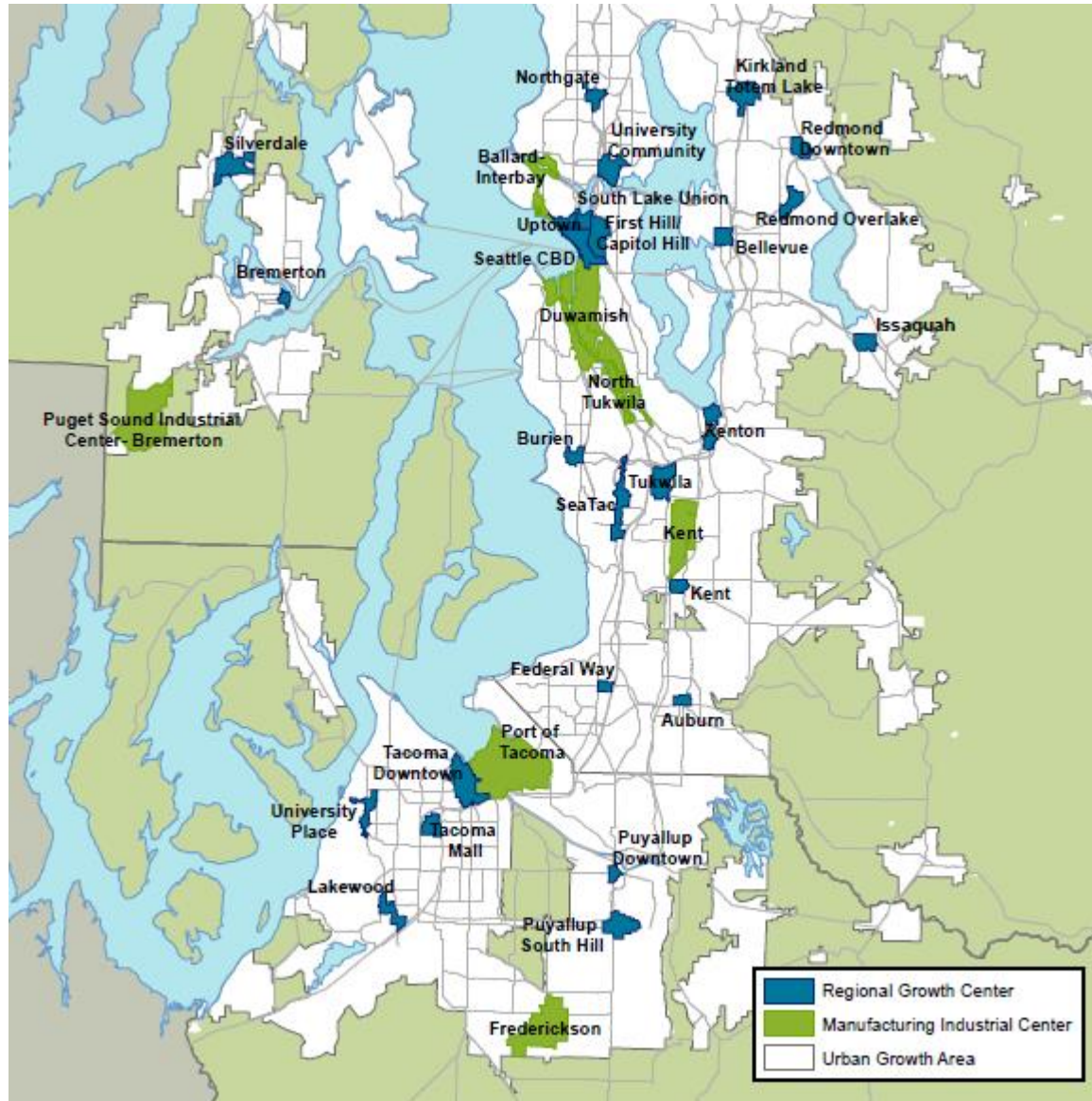
# Agenda

- Welcome & Introductions
- Travel Demand Forecasting Model
- Draft Performance Metrics and Targets
- Next Steps

# SR 509 Steering Committee 2016 Work Plan



# Context for the Project



- PSRC 2040
- Comprehensive Plans
- Urban and Manufacturing Industrial Centers
- Input from stakeholders

# Context for Project

- PSRC 2040
- Comprehensive Plans
- Urban and Manufacturing Industrial Centers
- Input from stakeholders
- Projected travel patterns



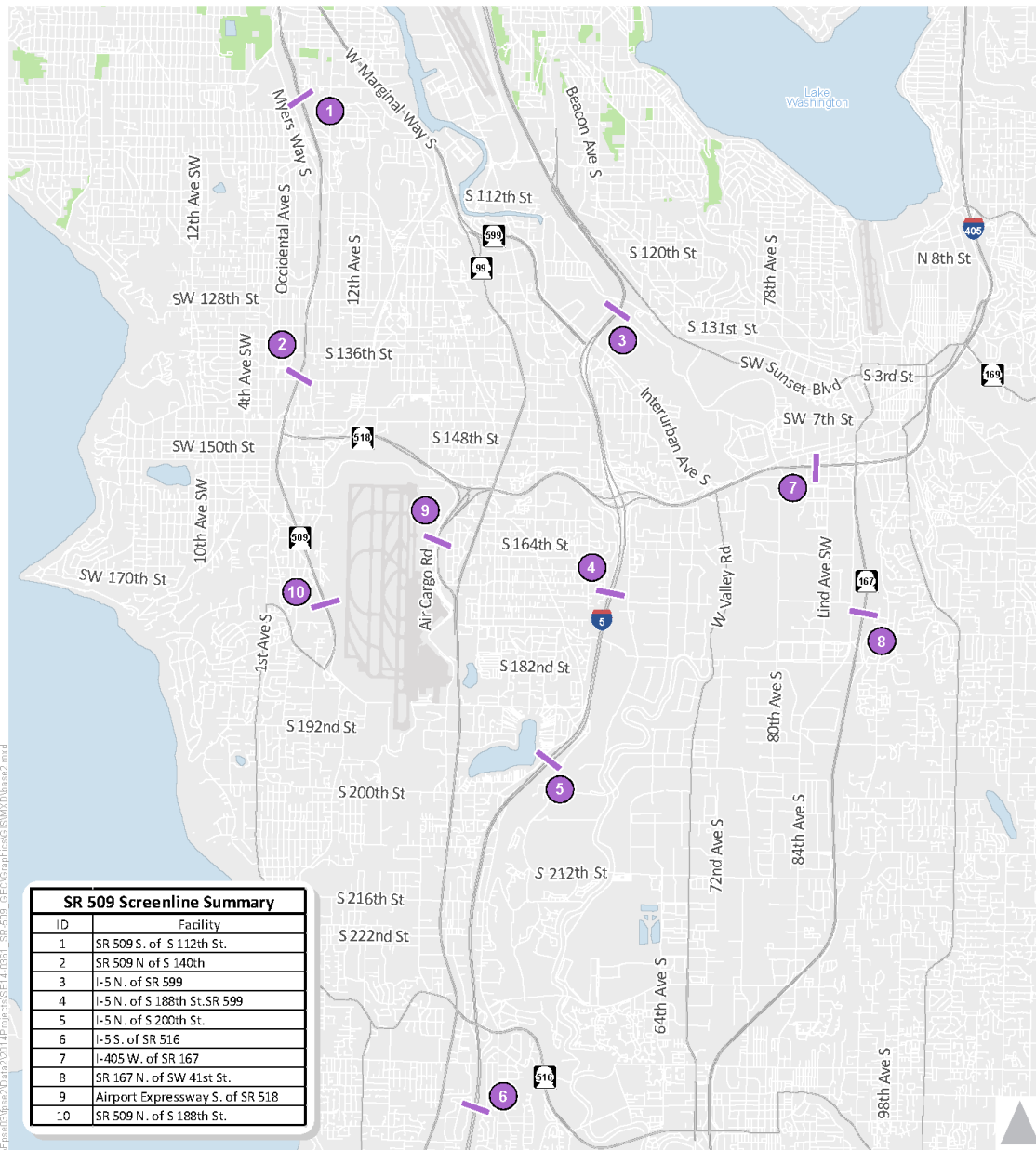
# Previous Traffic Forecasting

- High levels of peak period demand
- Used state-of-the-art forecasting that was available at the time (1999)
  - Daily demand factored to peak hour
  - Upstream and downstream physical constraints not fully captured

# Current Traffic Forecasting

- Still showing growth
- State-of-the-art forecasting
  - Time of day demands
  - More accurate trip generation detail
- Greater network resolution
- Capacity constraints reflected
- Tolling is accounted for
  - Legislative intent to toll

# SR 509 Traffic Forecasting Approach



## Baseline Calibration

- OFM census track household estimates
- Refined network
- AM and PM peak hour vehicle demands match 2015 counts

## Model Input

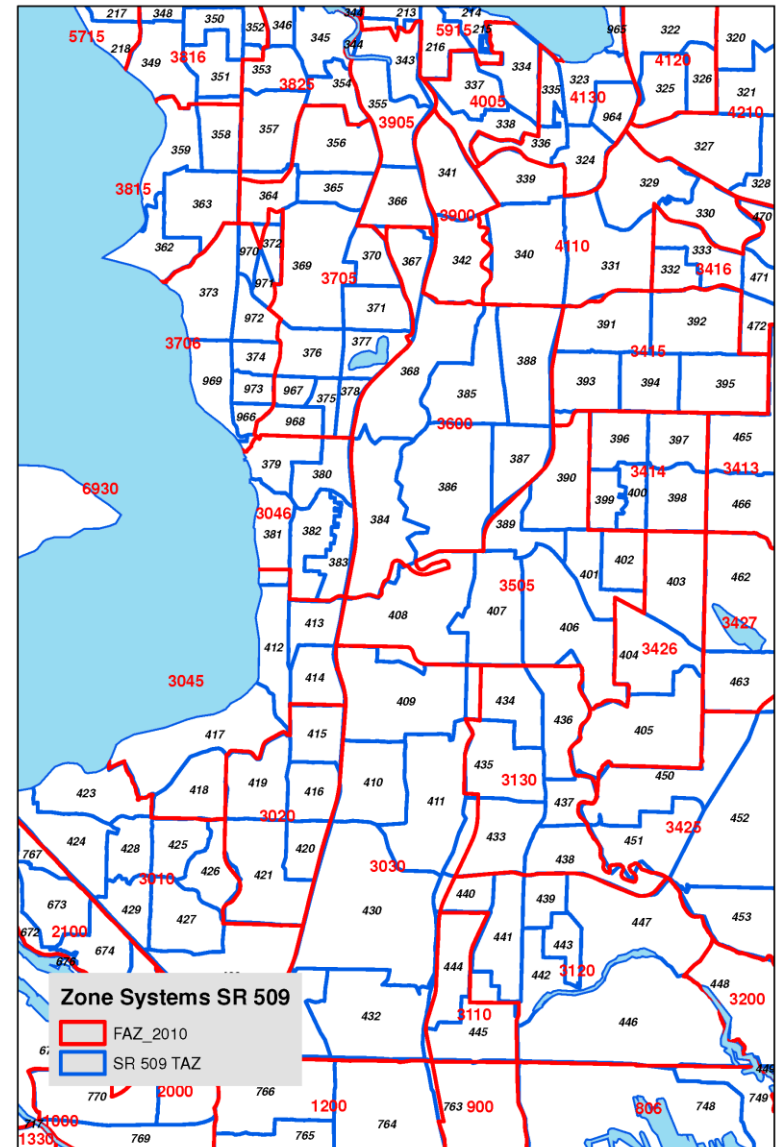
- Refined network
- Assumes tolling
  - Tolloed similarly to SR 520



# SR 509 Traffic Forecasting Approach

## Model Input (cont.)

- 2025 / 2045
- PSRC Land Use Vision (LUV) forecasts
- Area specific forecasts
  - Comprehensive Plans
  - Land use distributions



# SR 509 Traffic Forecasting Approach

## Assumed Transportation Projects

- Local agency plans
- WSDOT regional projects
- Sound Transit

## Trucks

- Limited truck data available
  - PSRC truck module
  - Freight Analysis Framework
  - Existing truck counts
  - Seattle marine terminal truck info

# SR 509 Traffic Forecasting Application

Data extracted from the model

- By facility and area
  - Future year demands
  - Travel time
  - Delay

# SR 509 Traffic Forecasting Application

## Discussion

# Review of Project Needs

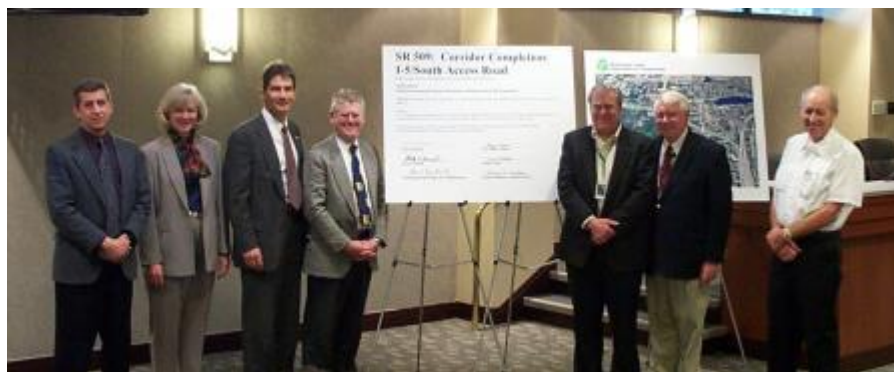
## 2003 EIS Purpose and Need:

- **Purpose:**

- Improve regional highway connections with an extension of SR 509 to serve current and future transportation needs in southwest King County and to enhance southern access to Sea-Tac International Airport.

- **Need:**

- Create system linkages, accommodate travel demand and capacity needs, and improve intermodal relationships.
- Close the gap between existing SR 509 and I-5
- Ease capacity and travel demands on local streets and major transportation routes, like I-5



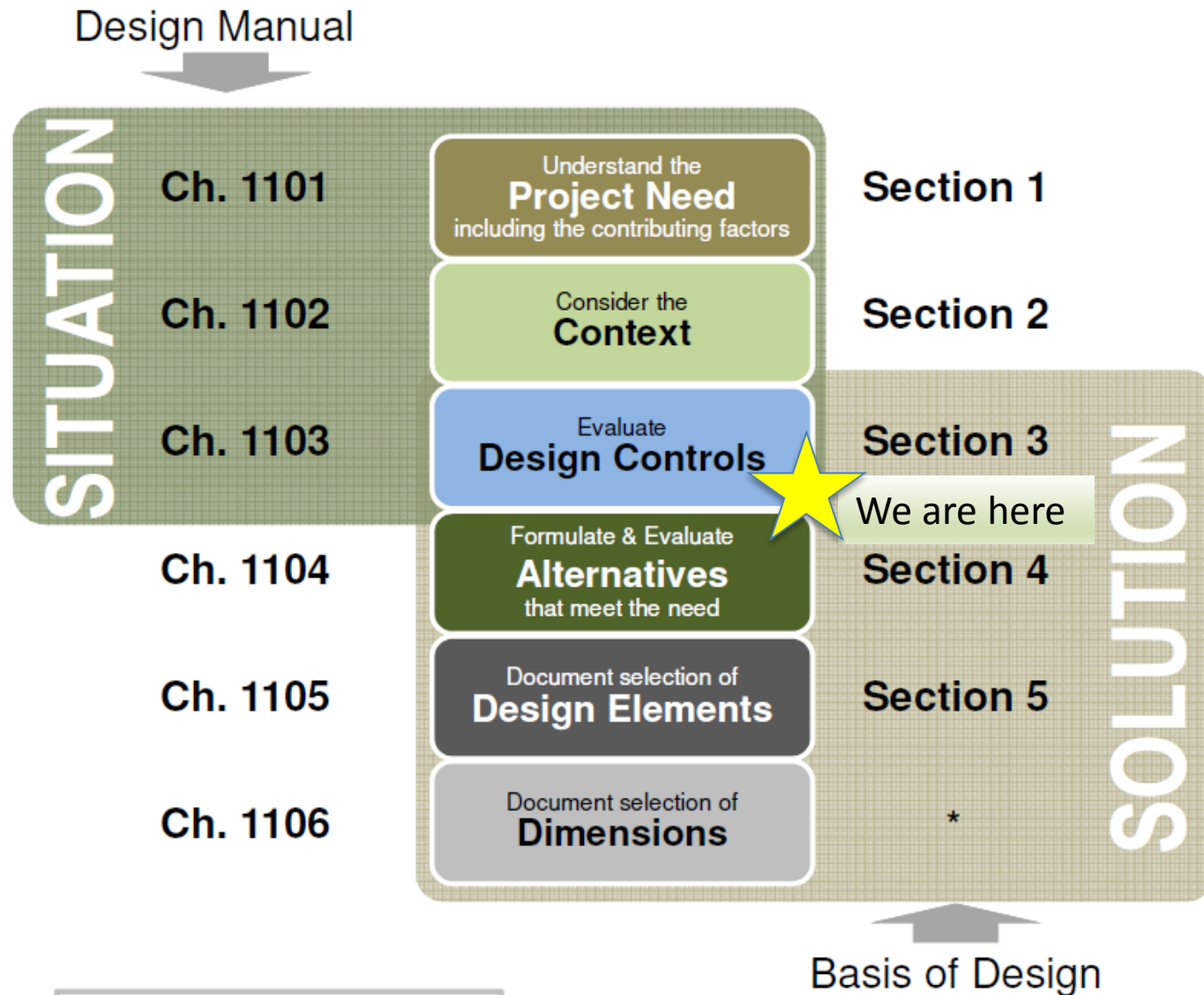
# Review of Project Needs

## 2003 EIS Objectives:

- Support local and regional comprehensive planning and development
- Maintain efficiency of existing roadways in the immediate vicinity of the airport terminals and parking garage
- Relieve local congestion
- Serve harbor freight operations
- Improve regional mobility and safety
- Be compatible with connections to High Capacity Transit
- Develop broad public and political support for the preferred alternative
- Design project in an environmentally responsible manner
- Provide cost-effective alternatives and solutions



# Practical Solutions Approach



# Essential Needs

Essential Needs Meeting 1		Updated Essential Needs
1	<ul style="list-style-type: none"> <li>Complete freeway network (close the gap)</li> </ul>	<ul style="list-style-type: none"> <li>Reduce travel time between Urban Centers and Manufacturing Industrial Centers in South King County</li> </ul>
2	<ul style="list-style-type: none"> <li>Improve freight travel time and reliability</li> </ul>	<ul style="list-style-type: none"> <li>Improve travel time reliability between Urban Centers and Manufacturing Industrial Centers in South King County</li> </ul>
3	<ul style="list-style-type: none"> <li>Improve southern connection to Sea-Tac Airport for people and goods</li> </ul>	<ul style="list-style-type: none"> <li>Reduce travel time from South Sound to Sea-Tac Airport</li> <li>Improve travel time reliability from South Sound to Sea-Tac Airport</li> </ul>
4	<ul style="list-style-type: none"> <li>Ease congestion between Seattle and Tacoma by utilizing unused capacity on SR 509</li> </ul>	<ul style="list-style-type: none"> <li>Reduce hours of delay in the project subarea network</li> <li>Maintain or improve I-5 operations</li> </ul>
5	<ul style="list-style-type: none"> <li>Support Regional Growth Centers for Burien, SeaTac, Kent and Federal Way, and Industrial Centers for Duwamish and Kent</li> </ul>	<ul style="list-style-type: none"> <li>Improve economic vitality</li> <li>Support local and regional comprehensive land use planning and development</li> </ul>
6		<ul style="list-style-type: none"> <li>Reduce number of serious injury and fatal crashes</li> </ul>
7	<ul style="list-style-type: none"> <li>Improve transit operations and connections to transit</li> </ul>	<i>Will be addressed by mode in the performance metrics</i>



# Contextual Needs

Contextual Needs Meeting 1		Updated Contextual Needs
1	<ul style="list-style-type: none"> <li>Support local and regional comprehensive planning and economic development</li> </ul>	<i>Moved to Essential Needs</i>
2	<ul style="list-style-type: none"> <li>Improve mobility and safety between the state's largest cities and counties                             <ul style="list-style-type: none"> <li>Improve mobility and safety in the I-5 corridor north of SR 516</li> <li>Improve mobility and safety in the I-5 corridor south of SR 516</li> </ul> </li> </ul>	<i>Moved to Essential Needs</i>
3	<ul style="list-style-type: none"> <li>Improve east-west connectivity across the Kent Valley MIC</li> </ul>	<i>Moved to Essential Needs (part of urban centers concept)</i>
4		<ul style="list-style-type: none"> <li>Reduce the number of serious injury and fatal crashes on local arterials</li> </ul>
5	<ul style="list-style-type: none"> <li>Decrease demand on local arterials, decreasing delay and increasing safety</li> </ul>	<i>Moved to Essential Needs (part of reduce hours of delay in the subarea network)</i>
6		<ul style="list-style-type: none"> <li>Support multimodal choices to Sea-Tac Airport</li> <li>Improve intermodal relationships</li> </ul>
7	<ul style="list-style-type: none"> <li>Provide pedestrian connectivity</li> <li>Provide bicycle connectivity</li> </ul>	<ul style="list-style-type: none"> <li>Reduce pedestrian vehicle exposure</li> <li>Continuity and consistency of pedestrian and bicycle facilities</li> </ul>
8		<ul style="list-style-type: none"> <li>Maintains forward compatibility with EIS</li> </ul>
9		<ul style="list-style-type: none"> <li>Reduce area of impact to sensitive areas</li> </ul>
10		<ul style="list-style-type: none"> <li>Compatibility with Sound Transit Federal Way Link Extension</li> </ul>

## Scenario Comparison Table

### Scenario Comparison Table - SR 509 Completion Project

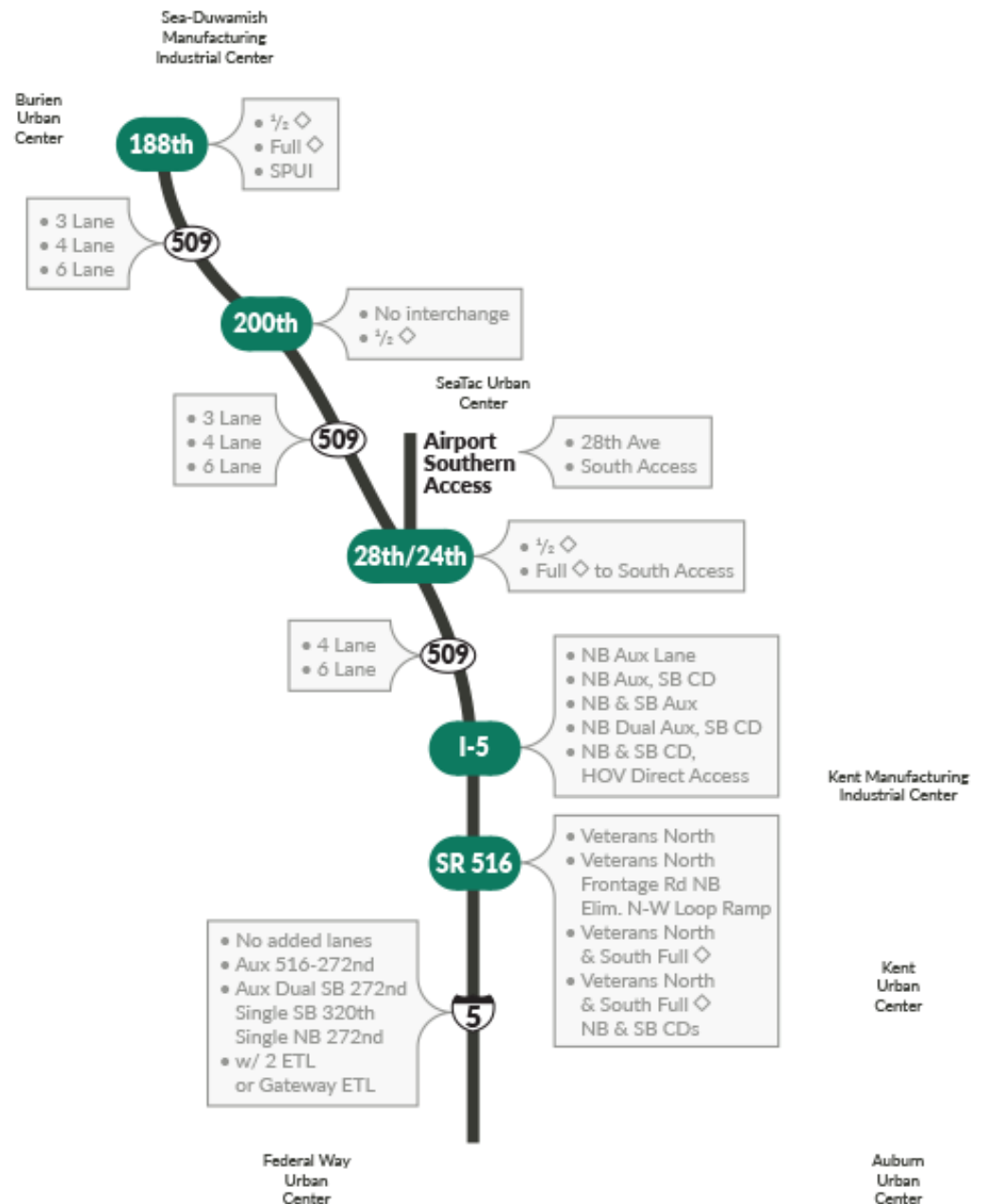
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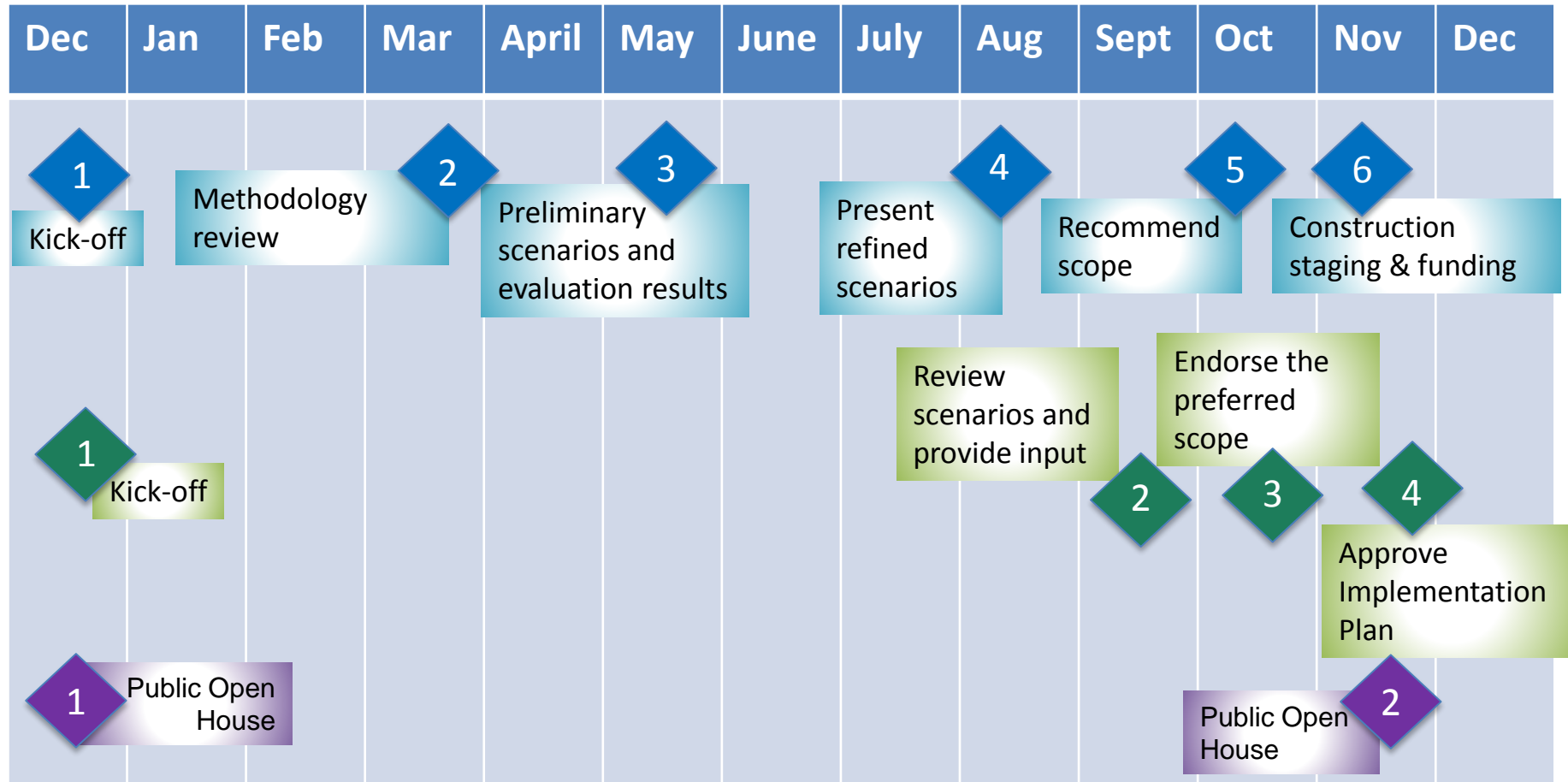
# Proposed Project Subarea



# Developing Scenarios



# Project Schedule (SR 509)



Steering Committee Meeting



Executive Committee Meeting



Open House

## More information:

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